

Title (en)

Antiferroelectric liquid crystal composition and liquid crystal indicating element.

Title (de)

Antiferroelektrische Flüssigkristallzusammensetzung und sie enthaltende in Anzeigeelement.

Title (fr)

Composition liquide cristalline ferro-électrique et élément indicateur la contenant.

Publication

EP 0676462 A1 19951011 (EN)

Application

EP 95105295 A 19950407

Priority

JP 7068994 A 19940408

Abstract (en)

An antiferroelectric composition comprising 70 wt% or more of a mixture consisting of two groups of compounds represented by the following general formula (I): <CHEM> wherein each of R, R<1>, R<2> and R<3> are an atom or an atomic group, R is an atomic group having the most carbon atoms, C* represents an asymmetric carbon, R<1>, R<2>, and R<3> are numbered in order of increasing number of carbon atoms (i.e. R<1> < R<2> < R<3>), or, if two or more groups have the same number of carbon atoms, they are numbered in order of increasing atomic group weight or increasing atomic weight, and wherein one component of the mixture has R<1>, R<2> and R<3> arranged clockwise when the molecule is viewed along the R-C bond, with the C* atom in front, and the other, counterclockwise. The composition provides an antiferroelectric liquid crystal composition having a lower crystal temperature and a wide liquid crystal temperature range with a small number of component compounds.

IPC 1-7

C09K 19/02; **C09K 19/20**; **C09K 19/30**; **C09K 19/32**

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CPC (source: EP US)

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Citation (search report)

- [X] EP 0517504 A1 19921209 - MITSUBISHI GAS CHEMICAL CO [JP]
- [X] EP 0525737 A1 19930203 - CHISSO CORP [JP]
- [X] EP 0562627 A1 19930929 - CHISSO CORP [JP]
- [X] EP 0582519 A1 19940209 - SHOWA SHELL SEKIYU [JP]
- [A] I.NISHIYAMA: "effect of size of lateral substituent at the chiral center of some chiral smectic liquid-crystalline phases", JOURNAL OF MATERIAL CHEMISTRY, vol. 3, no. 2, CAMBRIDGE (GB), pages 149 - 159

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